

Table S1. Revertant colonies in the absence or presence of S9 mix in the second bacterial reverse mutation assay results.

| | Dose ($\mu\text{g}/\text{plate}$) | TA97 | TA98 | TA100 | TA102 | TA1535 |
|-----------------------------|--|----------------------|----------------------|----------------------|---------------------|---------------------|
| Negative Control | | | | | | |
| Sterile distilled water -S9 | 0 | 122 \pm 13 | 40 \pm 4 | 152 \pm 23 | 265 \pm 10 | 17 \pm 6 |
| Sterile distilled water +S9 | 0 | 125 \pm 5 | 39 \pm 4 | 138 \pm 15 | 257 \pm 14 | 19 \pm 7 |
| Sterile distilled DMSO -S9 | 0 | 110 \pm 9 | 37 \pm 4 | 154 \pm 18 | 256 \pm 20 | 17 \pm 4 |
| Sterile distilled DMSO +S9 | 0 | 118 \pm 2 | 36 \pm 6 | 150 \pm 10 | 276 \pm 14 | 19 \pm 5 |
| Blank -S9 | 0 | 109 \pm 13 | 39 \pm 4 | 163 \pm 11 | 284 \pm 29 | 21 \pm 2 |
| Blank +S9 | 0 | 122 \pm 10 | 40 \pm 4 | 149 \pm 11 | 273 \pm 19 | 20 \pm 5 |
| AH -S9 | 8 | 118 \pm 8 | 39 \pm 4 | 162 \pm 11 | 292 \pm 16 | 18 \pm 7 |
| | 40 | 116 \pm 11 | 31 \pm 2 | 143 \pm 29 | 268 \pm 16 | 17 \pm 5 |
| | 200 | 114 \pm 15 | 39 \pm 3 | 159 \pm 17 | 279 \pm 16 | 12 \pm 3 |
| | 1000 | 115 \pm 10 | 35 \pm 4 | 156 \pm 16 | 256 \pm 12 | 22 \pm 4 |
| | 5000 | 116 \pm 14 | 40 \pm 5 | 140 \pm 30 | 301 \pm 8 | 14 \pm 1 |
| AH +S9 | 8 | 121 \pm 16 | 35 \pm 5 | 145 \pm 29 | 270 \pm 14 | 17 \pm 6 |
| | 40 | 128 \pm 1 | 34 \pm 3 | 157 \pm 27 | 294 \pm 13 | 12 \pm 1 |
| | 200 | 125 \pm 15 | 34 \pm 1 | 152 \pm 13 | 278 \pm 24 | 15 \pm 3 |
| | 1000 | 118 \pm 4 | 37 \pm 6 | 148 \pm 24 | 265 \pm 14 | 16 \pm 7 |
| | 5000 | 109 \pm 9 | 36 \pm 7 | 153 \pm 20 | 275 \pm 30 | 17 \pm 5 |
| Positive Control | | | | | | |
| Dexon | 50.0 | 1833 \pm 81 *** | 833 \pm 110 *** | | 753 \pm 46 *** | |
| SA | 1.5 | | | 922 \pm 89 *** | | 515 \pm 60 *** |
| 2-AF | 10.0 | 1478 \pm 70 *** | 2023 \pm 99 *** | 967 \pm 100 *** | | |
| DAN | 50.0 | | | | 850 \pm 46 *** | |
| CP | 200.0 | | | | | 436 \pm 51 *** |

Data are expressed as means \pm standard deviations ($n = 3$). *** Significantly different from the sterile water control group, $p < 0.001$.

Table S2. Cytotoxicity of AHE against CHO cells.

| Dose ($\mu\text{g}/\text{mL}$) | Cell Viability (%) |
|----------------------------------|--------------------|
| 0 | 100.00 \pm 0.00 |
| 1250 | 88.73 \pm 1.90 |
| 2500 | 66.73 \pm 3.57 |
| 5000 | 46.67 \pm 1.37 |

Data a expressed as means \pm standard deviations ($n = 3$).

Table S3. Body weight of BALB/c mice before gavage and dissection for the spermatogonial chromosomal assay.

| Groups | Dose (mg/kg·BW) | Sampling Point | Body Weight (g) | |
|-----------------------|-----------------|----------------|-----------------|-------------------|
| | | | Before Gavage | Before Dissection |
| Negative control | 0 | 24 | 26.22 ± 0.67 | 26.32 ± 0.67 |
| | | 48 | 26.70 ± 0.57 | 26.93 ± 0.59 |
| Positive control (CP) | 80 | 24 | 26.32 ± 1.19 | 26.40 ± 1.18 |
| | 1250 | 24 | 26.02 ± 1.03 | 26.08 ± 1.09 |
| AH | 2500 | 48 | 26.07 ± 1.23 | 26.25 ± 1.30 |
| | | 24 | 26.13 ± 1.02 | 26.22 ± 1.09 |
| | 5000 | 48 | 26.03 ± 1.05 | 26.20 ± 1.08 |
| | | 24 | 26.13 ± 0.56 | 26.17 ± 0.57 |
| | 5000 | 48 | 26.30 ± 0.47 | 26.41 ± 0.45 |
| | | 24 | 26.13 ± 0.56 | 26.17 ± 0.57 |

Data are expressed as means ± standard deviations ($n = 6$).

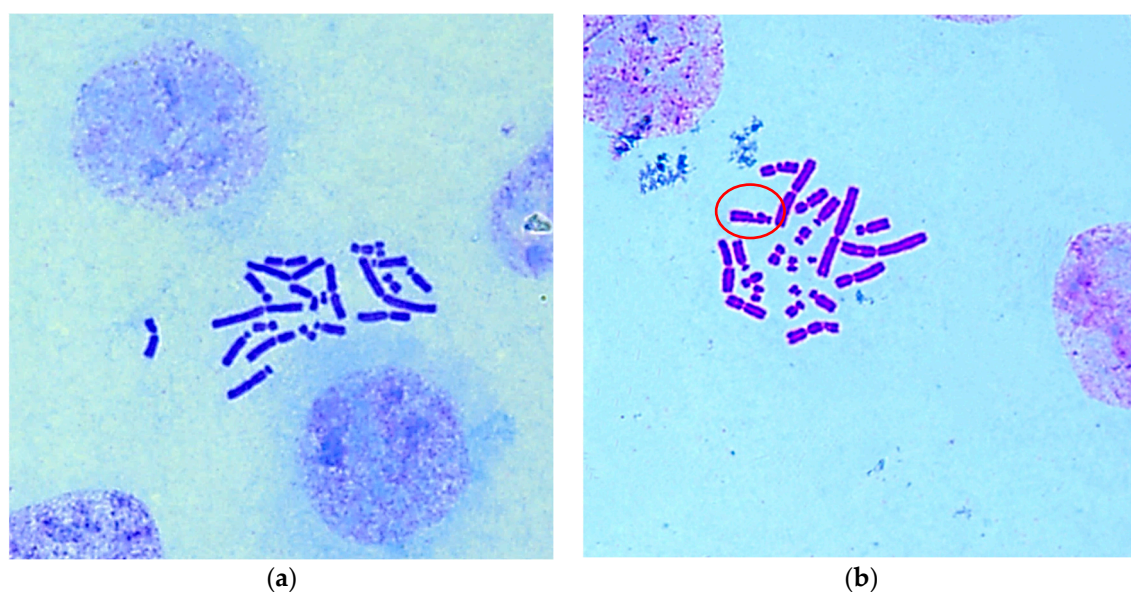


Figure S1. Representative photomicrographs of chromosomal aberrations in CHO cells under fluorescent microscope (magnification: $\times 1000$): (a) normal metaphase of CHO cell; (b) CHO cell with chromatid break (as shown in red circle) treated with positive control (0.06 $\mu\text{g/mL}$ CP).